

3 4 0436

|        |       |
|--------|-------|
| Site:  | _____ |
| Break: | 3.4   |
| Conc:  | _____ |

4768

**SITE SAFETY AND HEALTH PLAN**  
for the  
**CHEVRON CHEMICAL COMPANY SITE**  
**ORLANDO, FLORIDA**

prepared for:  
CHEVRON CHEMICAL COMPANY  
San Ramon, California

Prepared by:  
TASK Environmental, Inc.  
710 South Howard Avenue  
Tampa, Fl 33606

**May 1993**

**TASK**  
ENVIRONMENTAL

## HEALTH AND SAFETY PLAN

Chevron Chemical Company Site

Orlando, Florida

The site history, site description, project objectives, and description of the field activities to be performed are presented in the Removal Action Report (BCC, 1992) and the project Sampling and Analysis Plan Amendment (TASK 1993). This Health and Safety Plan (HSP) covers activities which are to be conducted during the Remedial Investigation and Feasibility Study.

### KEY PERSONNEL

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Project Manager (PM)            | <u>Susan Klinzing Tobin, P.G.</u> |
| Health and Safety Officer (HSO) | <u>Allen J. Tobin</u>             |
| Site Safety Officer (SSO)       | <u>Allen J. Tobin</u>             |
| Project Geologist               | <u>Susan Klinzing Tobin, P.G.</u> |

The project field staff team members have completed 40 hours of comprehensive health and safety training which meets the requirements of Title 29 Code of Federal Regulations Part 1910.120 (29 CFR 1910.120).

The PM is responsible for generating, organizing, and compiling the HSP which describes all planned field activities and potential hazards that may be encountered at the site. The PM is also responsible for assuring that adequate training and safety briefings for the project are provided to the project team. The PM has provided a copy of this HSP to each member of the project field team and one copy to each subcontractor prior to the initiation of field activities.

The HSO is responsible for developing and coordinating the health and safety program. For specific projects, the HSO is responsible for reviewing and approving the draft HSP for accuracy and incorporating new information or guidelines which aid the PM and SSO in further definition and control of the potential health and safety hazards associated with the project.

The project geologist is responsible for ensuring that all data acquisition is performed in accordance with the Sampling and Analysis Plan Amendment, and HSP, and that deviations from the plan are based upon field conditions encountered and are well documented in the field notes. Their health and safety responsibilities include:

1. Following the HSP.
2. Reporting to the PM any unsafe conditions or practices.
3. Reporting to the PM all facts pertaining to incidents which result in injury or exposure to toxic materials.
4. Reporting to the PM equipment malfunctions or deficiencies.

The SSO has onsite responsibility for ensuring that all team members, including subcontractors, comply with the HSP. It is the SSO's responsibility to inform the subcontractors and other field personnel of chemical and physical hazards as he becomes aware of them. The SSO has the authority to monitor and correct health and safety problems as noticed on site. Additional SSO responsibilities include:

1. Providing site safety briefings for team members.
2. Updating equipment or procedures to be used on site based upon new information gathered during the site investigation.
3. Inspecting all personal protective equipment (PPE) prior to onsite use.
4. Assisting the PM in documenting compliance with the HSP by completing the standard health and safety forms.
5. Assisting in and evaluating the effectiveness of decontamination procedures for personnel, protective equipment, sampling equipment and containers, and heavy equipment and vehicles.
6. Enforcing the "buddy system" as appropriate for site activities.
7. Posting location and route to the nearest medical facility; arranging for emergency transportation to the nearest medical facility.
8. Posting the telephone numbers of local public emergency services; i.e., police and fire.

9. Stopping operations that threaten the health and safety of the field team or surrounding populace.
10. Entering the exclusion area in emergencies after he has notified emergency services.
11. Observing field team members for signs of exposure, stress, or other conditions related to pre-existing physical conditions or specific site work activities.

### PROJECT CONTACTS

|                            |   |
|----------------------------|---|
| Client:                    | Chevron Chemical Company<br>Jeff Wyatt<br>(510)842-5883   |
| Regulatory Agency:         | US EPA Region IV<br>Dorothy Rayfield<br>(404)347-5065   |
| Project Manager:           | Susan Klinzing Tobin, P.G.<br>(813)254-8838   |
| Health and Safety Officer: | Allen J. Tobin<br>(813)254-8838   |
| Site Safety Officer:       | Allen J. Tobin<br>(813)254-8838   |
| Project Geologist:         | Susan Klinzing Tobin, P.G.<br>(813)254-8838   |
| Subcontractors:            | Diversified Drilling<br>William MacCarty<br>(813)988-1132<br><br>Pace Laboratories<br>Beth Lamey<br>(813)884-8268 |

3 4 0442

The following emergency telephone numbers will be used to call for assistance:

City of Orlando, Florida

|                 |                |
|-----------------|----------------|
| Fire Department |                |
| Emergency       | 911            |
| Non-emergency   | (407) 658-6901 |

|                   |                |
|-------------------|----------------|
| Police Department |                |
| Emergency         | 911            |
| Non-emergency     | (407) 657-2500 |

|           |     |
|-----------|-----|
| Ambulance | 911 |
|-----------|-----|

|  |                |
|--|----------------|
| Orange County Environmental Protection | (407) 244-7400 |
|--|----------------|

|                    |                          |
|--------------------|--------------------------|
| Hospital           |                          |
| AMI Medical Center | 1800 Mercy Drive         |
| Emergency Room     | (407) 295-5151 Ext: 1300 |

|                  |               |
|------------------|---------------|
| US EPA Region IV | (404)347-4062 |
|------------------|---------------|

|                |                |
|----------------|----------------|
| OSHA Region IV | (404) 881-3573 |
|----------------|----------------|

|                          |                |
|--------------------------|----------------|
| National Response Center | (800) 424-8802 |
|--------------------------|----------------|

|                  |                |
|------------------|----------------|
| Chemtrec Hotline | (800) 424-9300 |
|------------------|----------------|

|              |                |
|--------------|----------------|
| RCRA Hotline | (800) 424-9346 |
|--------------|----------------|

|                       |                |
|-----------------------|----------------|
| NIOSH Regional Office | (404) 221-2396 |
|-----------------------|----------------|

The contractor and all subcontractors are responsible for their own corporate health and safety program and the health and safety of their own employees. A copy of their written program must be submitted for review to the Health and Safety Officer. The subcontractor's health and safety requirements for this project are specified by this HSP.

## HAZARD ANALYSIS

The potential hazards to personnel working at the Chevron Chemical Company site have been identified as chemical contamination and physical hazards of working around drill rigs and heavy equipment, uneven terrain, holes or ditches, sharp objects (such as broken glass, rebar, and wire), unstable structures and harmful organisms such as snakes, scorpions and insects. Adverse weather conditions, sunburn, and heat stress are also potential hazards which must be monitored. The potential hazards relative to the potential for exposure are described below.

## CHEMICAL CONTAMINATION

A Removal Action has been conducted at the site to remove contaminated soil. The surface soils on the site were removed to eliminate Chlordane concentrations at the surface which were in excess of 5 milligrams per kilogram (mg/kg). Previous investigations and laboratory analysis for the groundwater on the site have indicated the presence of a number of chemical contaminants including organic solvents and pesticides. Specific key contaminants are described below.

Arsenic: A silver-gray, brittle, metallic-looking crystalline solid that loses its luster and darkens in moist air. It is insoluble in water, caustics, and nonhomoxidizing acids. Reacts with nitric acid to form arsenous or arsenic acid. It is highly toxic by ingestion and inhalation. Acute exposure symptoms from ingestion include nausea, vomiting, and diarrhea which can progress to shock and death. Chronic poisoning can result in exfoliation and pigmentation of the skin, herpes, polyneuritis altered hematopoiesis, and the degeneration of the liver and kidneys. It is a known carcinogen.

Chlordane: Technical chlordane is a mixture of chlorinated hydrocarbons consisting of isomers of chlordane and closely related compounds and by-products. Approximately one-half of the composition consists of the two major isomers of chlordane and no other individual component exceeds about one-tenth of the total product. Chlordane's chemical name is 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7a-hexahydro-4,7-methanoindane. It is a viscous, clear to amber colored liquid with no odor. It is insoluble in water but miscible with aliphatic and aromatic hydrocarbon solvents. It is a stomach and contact insecticide and fumigant. It is toxic by ingestion, inhalation, and percutaneous absorption and is moderately irritating to the skin. Acute toxicity includes irritability, convulsions, and deep depression. Continued ingestion may cause degenerative changes in the liver.

DDT: The chemical name for DDT is Dichlorodiphenyl-trichloroethane. It is a colorless crystal or a white to slightly off-white powder, usually odorless or with a slight aromatic odor. It is practically insoluble in water, has limited solubility in aliphatic oils and

is soluble in apolar organic solvents. It is not compatible with alkaline materials and should not be mixed with iron and aluminum salts. It is toxic by ingestion, inhalation, and skin absorption, especially in solution. Acute exposure symptoms include tremors of head and neck muscles, tonic and clonic convulsions, cardiac or respiratory failure, and death. The estimated oral fatal dose is 500 mg/kg of the body weight of the individual. Death usually occurs in 2 to 24 hours. Chronic exposure symptoms are hepatic damage, central nervous system degeneration, agranulocytosis, dermatitis, weakness, convulsions, coma and death.

Endrin: Generic name for 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octachydro-1,4-endo-endo-5,8-dimethanonaphthalene. It is a stereo-isomer of dieldrin. It is a white crystalline powder insoluble in water and methanol, but moderately soluble in other common organic solvents. It was formerly used as an insecticide, but its manufacture and use has been discontinued in the U.S. It is highly toxic by inhalation and skin absorption. Its symptoms are similar to dieldrin and aldrin and it is a suspected carcinogen.

Lindane: The gamma isomer of 1,2,3,4,5,6-hexachlorocyclohexane. It is a white, free-flowing crystalline material with a slight musty odor used as an insecticide. It is highly toxic and poisoning may occur by ingestion, inhalation, or percutaneous absorption. Acute exposure symptoms include dizziness, headache, nausea, vomiting, diarrhea, tremors, weakness, convulsions, dyspnea, cyanosis, and circulatory collapse. Its vapors may irritate the eyes, nose, and throat and skin contact may cause local sensitivity reactions. This substance has been listed as a known carcinogen.

Xylene: A commercial mixture of the three isomers, ortho-, meta-, and para-xylene. It is flammable and a moderate fire risk and toxic by ingestion and inhalation. Exposure may be narcotic in high concentrations. Its chronic toxicity is not well defined, but it is less toxic than benzene.

Table 1-1 presents exposure limits and additional contaminant information for the key chemicals which may be present at the site.

See  
Table  
1-1

## PHYSICAL HAZARDS

A number of specific site physical hazards are present at the work site. These hazards are a function of the nature and condition of the site as well as a consequence of the work being performed.

TABLE 1-1. EXPOSURE LIMITS AND ADDITIONAL CONTAMINANT INFORMATION

| Chemicals                                   | Highest Concentration Detected in Groundwater Samples | Ionization Potential          | TLV <sup>a</sup>      | IDLH <sup>b</sup> Level | Flammability Information<br>Flammable Range      Flash Point   | Warning Concentrations                      | Remarks  |
|---|---|-------------------------------|-----------------------|-------------------------|--|---|--|
| Arsenic                                     | .092 mg/l   | -                             | 10 ug/m <sup>3</sup>  | Ca                      | Slightly explosive in the form of dust                         | -   | LD <sub>50</sub> below 50 mg/kg (rats).  |
| Chlordane                                   | Not Detected  | -                             | 0.5 mg/m <sup>3</sup> | 500 mg/m <sup>3</sup>   | Not Combustible  | -   | LD <sub>50</sub> orally in rats: 367-515 mg/kg; Acute dermal (rabbits) >200 mg/kg but <2000 mg/kg. |
| 4,4'- DDT                                   | Not Detected  | -                             | 1 mg/m <sup>3</sup>   | Ca                      | Not Combustible  | -   | The acute oral toxicity for man has been established at 250 mg/kg.                                 |
| Endrin                                      | 1.5 ug/l  | -                             | 0.1 mg/m <sup>3</sup> | 200 mg/m <sup>3</sup>   | Not Combustible  | -   | LD <sub>50</sub> orally in rats: 7-15 mg/kg; dermally (female rats): 15 mg/kg.                     |
| Lindane                                     | 18 ug/l   | -                             | 0.5 mg/m <sup>3</sup> | 1,000 mg/m <sup>3</sup> | Not Combustible  | -   | LD <sub>50</sub> in male rats: 88-125 mg/kg orally; 1,000 mg/kg dermally.                          |
| Xylenes<br>o-xylene<br>m-xylene<br>p-xylene | 15,000 ug/l   | 8.56 eV<br>8.56 eV<br>8.44 eV | 100 ppm               | 10,000 ppm              | 1.0 - 6%      90°F<br>1.1 - 7%      84°F<br>1.1 - 7%      81°F | 1.8 ppm<br>1.1 - 3.7 ppm<br>0.47 - 0.53 ppm |  |

- \* Threshold Limit Value as the time-weighted average (TWA) airborne concentration as published by the American Conference of Government Industrial Hygienists (ACGIH), 1989-1990.
- \* Immediately Dangerous to Life or Health as published by the National Institute for Occupational Safety and Health, Publication Number 85-114, September 1985.
- \* "Ca" - NIOSH has recommended that the substance be treated as a potential human carcinogen.



The work area is now an open field. Some uneven terrain, holes and ditches, are present on the site. Project site personnel should be alert for these potential dangers at all times. Since groundwater sampling will be conducted using a drill rig, special precautions should be taken when working around this equipment. Drilling locations must be free of underground and overhead hazards such as buried objects and power lines. Various harmful species of plants (e.g., poison ivy), animals (e.g., poisonous snakes, scorpions), and insects (e.g., fire ants, wasps, mosquitos) found in central Florida have been identified on the site and special care should be taken to avoid any contact with them.

Weather conditions will be closely monitored and all site work will be suspended during thunderstorms, heavy rains, fog, dust storms, hail, hurricanes, and darkness. Sunburn is a physical hazard to site personnel when working outdoors on sunny days for extended periods of time. Excessive exposure to sunlight is associated with the development of skin cancer and preventive measures such as using sun-screen lotion and wearing hats and long-sleeved shirts should be taken.

## HEAT STRESS

Heat stress is a major site hazard when field activities are performed on warm, sunny days, and is accentuated when chemical protective clothing is worn. Heat stress prevention measures and monitoring will be implemented if site temperatures are above 70 degrees Fahrenheit (F).

Precautions to prevent heat stress will include work/rest cycles so that rest periods are taken before excessive fatigue occurs, and regular intake of water to replace that lost from sweating. Work/rest cycles will be based on monitoring the heart rate (pulse) of each individual worker. Rest breaks will be long enough to reduce the heart rate (HR) below levels calculated according to the following method:

1. The worker will initially determine their resting HR prior to starting work activities.
2. At the start of the first rest period, the worker will determine their HR. This initial HR should not exceed the individuals age-adjusted maximum HR, which equals  $[(0.7)(220 - \text{age in years})]$ . At 1 minute into the rest period, the recovery HR will be determined. The recovery HR should not exceed 110 beats per minute .
3. If the initial HR exceeds the age-adjusted maximum HR, or the 1-minute recovery HR is greater than 110 beats per minute, then the next work period will be decreased by 10 minutes.

Heat stress due to water loss can be prevented. To prevent dehydration, water intake must approximate sweat loss. Water intake guidelines are as follows:

1. The sense of thirst is not an adequate regulator of water replacement needs during heat exposure. Therefore, water must be replaced at prescribed intervals.
  - a. Before work begins, drink two 8-ounce glasses of water.
  - b. During each rest period, drink at least two 8-ounce glasses of water.
2. Plain water, served cool, is excellent. An adequate supply of potable water and drinking cups will be readily available, in a support vehicle, to provide water during rest periods.
3. Adding salt to water is not recommended. However, other fluids, in addition to water, could include dilute fruit juices and electrolyte replacement drinks diluted 3:1 with water. Do not use salt tablets.

An initial work/rest cycle of 1 hour and 15 minutes rest is recommended for protection of staff when heat stress hazard is high. The recommended cycle will be adjusted up or down based upon worker monitoring, environmental conditions, and the judgement of the SSO. If at any time field team members recognize the signs or symptoms of heat stress prior to a scheduled rest period, they will notify the SSO immediately in order that a rest period can be called.

Heat stress, if not prevented, results in heat stress illnesses. Two critical illnesses, if not recognized and treated immediately, can become life-threatening. These are heat exhaustion and heat stroke. Heat exhaustion will result if the prevention measures described above are not implemented. Ignoring the signs and symptoms of heat exhaustion will lead to the development of heat stroke.

Heat stroke is an immediate, life-threatening condition that results because the body's heat regulating mechanisms shut down, and the body cannot cool itself sufficiently. As heat is excessively stored in the body, brain damage can result causing permanent disability or death.

Heat Exhaustion: The signs and symptoms of heat exhaustion are headache; dizziness; nausea; weakness; fainting; profuse sweating; loss of appetite; approximately normal body temperature; dilated pupils; weak and rapid pulse; shallow and rapid breathing; possible cramps in abdomen and extremities; possible vomiting, difficulty walking; cool and sweaty skin to the touch; pale to ashen gray coloring.

First aid for heat exhaustion is as follows:

1. Immediately remove victim to the support area, or if you are the victim, proceed to the support area.
2. Decontaminate, if practical, before entering support area.
3. Start cooling, but be careful not to cause a chill (i.e., rest in shade and apply wet towel to forehead; open up and/or remove clothing as much as practical, especially chemical-resistant clothing.
4. Drink cool water slowly, but only if conscious and not in shock.
5. If vomiting, and/or the signs and symptoms are not lessening within an hour, call for emergency help and/or transport the victim to emergency room.
6. It is likely that a heat exhaustion victim will be unable to work for the remainder of the day.

Heat Stroke (aka: sun stroke): The signs and symptoms of heat stroke are hot, dry skin to the touch; reddish coloring; body temperature >105 degrees F; no sweating; mental confusion; deep, rapid breathing that sounds like snoring progressing to shallow, weak breathing; headache; dizziness; nausea; vomiting; weakness; dry mouth; convulsions, muscular twitching, sudden collapse; possible unconsciousness.

First aid for heat stroke is as follows:

1. Immediately remove the victim to support area; prior to entering the support area, remove and dispose the victim's chemical-resistant clothing.
2. Cool the victim rapidly using whatever means are available, including: shade; opening up and/or removing clothing; soaking clothing/skin with water and fanning; placing victim in vehicle using air conditioning on maximum.
3. Do not give drinking water to victim.
4. Treat for shock, if needed.
5. Transport the victim to the emergency room or call for emergency help; no exceptions for heat stroke victim.

## TRAINING REQUIREMENTS

All staff working on site have completed training in hazard recognition and basic health and safety issues as required by the occupational safety and health regulations contained in 29 CFR 1910.120 (e). In addition, each employee will be familiar with the requirements of this HSP, and will participate in daily site activity and safety briefings.

## PERSONAL PROTECTIVE EQUIPMENT

Based upon the hazard analysis for this project, the following Personal Protective Equipment (PPE) will be required and used. Changes to these specified items of PPE will not be made without the approval of the SSO.

Monitor well construction and sampling will be conducted using modified Level D personal protective equipment with upgrade to Level C or Level B if site conditions warrant. Such conditions include organic vapors of 10 part per million (ppm) or greater above background levels for upgrade to Level C, and detection of organic vapors at a sustained concentrations of 50 ppm or greater for upgrade to Level B.

Drilling activities during the groundwater investigation will be conducted in Level D PPE with an upgrade to Level C if conditions warrant.

Level D PPE includes:

- Safety boots and disposable boot covers
- Hard hats
- Cotton or Tyvek coveralls
- Vinyl or latex surgical gloves (inner)
- Hearing protection (if needed)
- Eye protection.

Level C PPE includes:

- Fullface air purifying respirator with combination organic vapor and pesticide filters
- Tyvek coveralls
- Vinyl or latex surgical gloves (inner)
- Nitrile gloves (outer)
- Safety boots and disposable boot covers
- Hard hat
- Hearing protection (if needed).

Level B PPE includes:

- Self-contained breathing apparatus
- Saranex coveralls
- Vinyl or latex surgical gloves (inner)
- Nitrile gloves (outer)
- Safety boots and disposable boot covers
- Hard hat
- Hearing protection (if needed).

Gloves and boot covers will be taped around the cuffs.

## ENVIRONMENTAL MONITORING PLAN

The potential hazards identified in the hazard analysis portion of this HSP determined the need for initial and ongoing monitoring for assessment of exposure to the hazards. Monitoring for organic vapor will be done continuously using an Organic Vapor Analyzer (OVA) or a Photoionization Detector (PID). If concentrations of 10 ppm or greater above background are detected for total organic vapors, as measured in the working breathing zone, then full-face respirators will be worn. If total organic vapors are consistently detected as greater than 50 ppm, then work activities will stop and the level of protective equipment will be reassessed. Measurements will be made at the borehole opening. Instruments will be calibrated prior to use for each day's activities.

Heat stress will be monitored as described in the hazard analysis portion of this HSP.

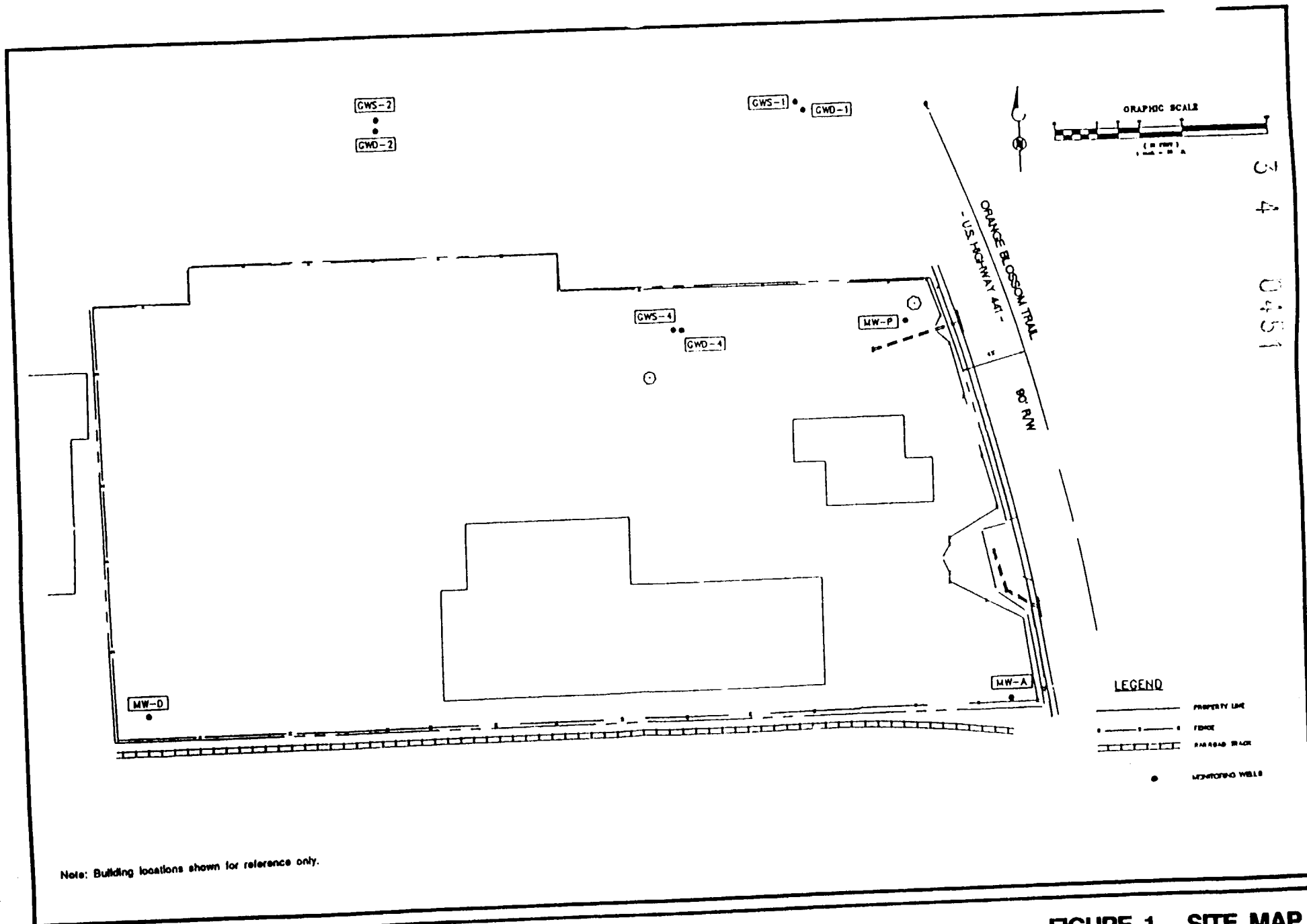
## MEDICAL SURVEILLANCE REQUIREMENTS

Medical surveillance is conducted as a routine program for all project field staff which meets the requirements of 29 CFR 1910.120 (f). There will not be any special medical tests or examinations required for staff involved in this phase of the project.

## SITE CONTROL MEASURES

A map of the site is included as Figure 1. Work areas including exclusion zone, decontamination areas and support areas will be established onsite. These areas will be delineated depending on the specific field activities being conducted. The offsite groundwater investigation may not involve a delineated exclusion zone but will utilize a portion of the site for decontamination and support areas.

See  
Figure  
1



Chevron Orlando Site  
RI/FS SACM

**FIGURE 1 SITE MAP**

TASK Environmental  
PTI Environmental Services

All lunch and rest breaks will be taken away from the work areas, and preferably off site for lunch breaks. Any and all support areas will be upwind of the field activities. Communication between field team members will consist of verbal communications aided by handheld 2-way radios and hand signals (if Level C PPE is necessary).

The nearest medical assistance is AMI Medical Center.

## WORK PRACTICES

Safe work practices are part of assuring a safe and healthful working environment. These practices are standardized for all field activities, and it is the responsibility of all project personnel to follow safe work practices when conducting field activities.

Safe work practices to be employed during the entire progress of field work are as follows:

1. Set up, assemble, and check out all equipment for integrity and proper function prior to starting work activities.
2. Do not use faulty or suspect equipment.
3. Use only new and intact protective clothing. Change the suit, gloves, etc. if they tear.
4. Do not use hands to wipe sweat away from face. Use a clean towel or paper towels.
5. Practice contamination avoidance at all times.
6. Do not smoke, eat, drink or apply cosmetics while in the contaminated areas of the site or prior to decontamination.
7. Wash hands, face, and arms prior to taking rest breaks, lunch break, and leaving the site at the end of the work day.
8. Check in and out with the SSO upon arrival and departure.
9. Perform decontamination procedures completely as required by this HSP.
10. Notify the SSO immediately if there is an accident that causes an injury or illness.

11. Use the buddy system when working in the contaminated areas of the site.
12. Do not approach or enter an area where oxygen deficiency or toxic or explosive concentrations of airborne contaminants may exist without the proper personal protective equipment and appropriate support personnel.
13. Use respirators correctly and as required for the work area; check the fit of the respirator with a negative or positive pressure test; do not wear respirator with facial hair or other conditions that prevent a face-to-facepiece seal; do not wear contact lenses when the use of a respirator is required.

### DECONTAMINATION

Decontamination will take place in the decontamination areas established. All workers, PPE and sampling equipment leaving the work area will be decontaminated to prevent the spread of hazardous materials. All workers will wash hands, arms, and face after removing PPE and prior to leaving the site. Disposable items will be bagged for proper disposal along with other wastes from the property. Support vehicles are to be left outside the work area so that decontamination will not be necessary. There are no special emergency decontamination procedures anticipated for this project.

Sampling equipment will be decontaminated using the following procedures:

1. Rinse with tap water to remove any gross contamination.
2. Clean with an Alconox and deionized water solution.
3. Rinse with deionized water.
4. Spray with a solution containing 20% Isopropyl Alcohol and 80% deionized water.

Drilling equipment will be steam cleaned prior to its initial use and between each sampling location.

### EMERGENCY PROCEDURES

In the event of an emergency on site, the SSO will direct the course of action. It may be necessary for the SSO to depend upon the other on-site personnel for assistance. The SSO will call for emergency assistance if needed. As soon as practical, the SSO will contact the PM



and the HSO. All staff assigned to this project will be briefed on the procedures and responsibilities for implementation. A map showing the location and route to the hospital is included as Figure 2.

See  
Figure  
2

The SSO is trained in first aid and CPR. A first aid kit will be located in the support vehicle and decontamination area. During drilling activities, the emergency shut-off switch for the drill rig will be identified, and all field personnel working in the area will be informed of its location and function during the site safety briefing. During field activities, a mobile phone will be available within the designated support area of the site. A cellular telephone will be onsite at all times in the support vehicle. The emergency telephone numbers to be used to call for assistance are listed in the section on Key Personnel and Responsibilities with the reference list of project contacts.

### DOCUMENTATION

The implementation of the HSP must be documented to assure employee participation and protection. In addition, the regulatory requirements must be met for recordkeeping on training, medical surveillance, injuries and illnesses, exposure monitoring, health risk information, and respirator fit-tests. Documentation of the implementation of this plan will be maintained in the project file and copies will be maintained onsite.

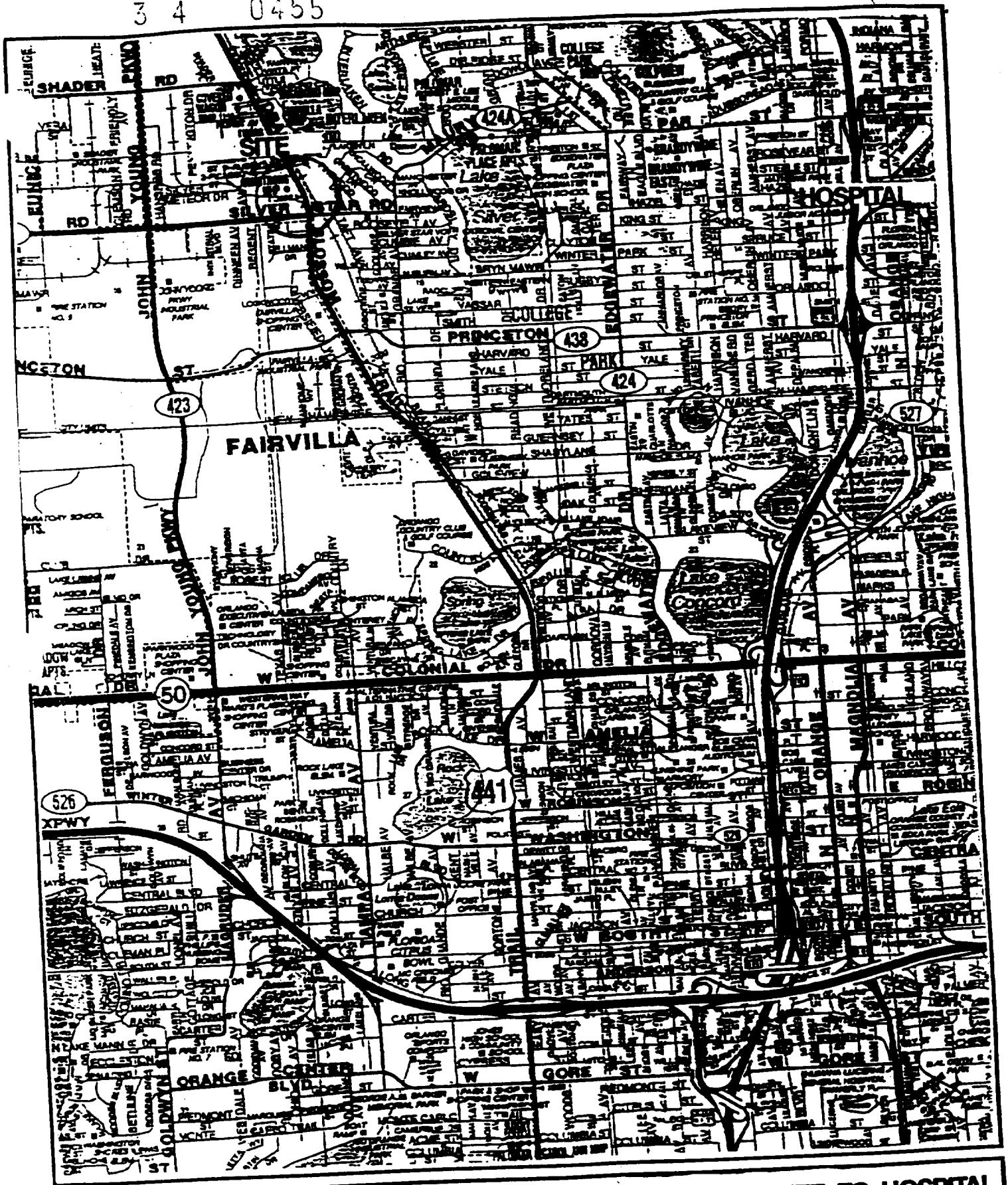


FIGURE 2 ROUTE TO HOSPITAL

Chevron Orlando Site  
RI/FS SACM

TASK Environmental  
PTI Environmental Services

**CHEVRON ORLANDO SITE  
DIRECTIONS TO  
FLORIDA HOSPITAL - ORLANDO**

From Site turn **Right** on **Orange Blossom Trail**

Travel to Smith Street and turn **Left** onto **Smith Street**

**Princeton** bears to the **Right**, Take **Princeton** to **Orange Avenue**

Turn **Left** onto **Orange Avenue**

Travel two or three blocks to **Rollins Street** and turn **Right** onto **Rollins Street**

**Florida Hospital - Orlando** is on the **Left**

3 4 0457

**TASK ENVIRONMENTAL, INC.**  
**ATTACHMENT A**  
**EMPLOYEE ACKNOWLEDGEMENT**

I hereby certify that I have read and understand the safety and health guidelines contained in TASK Environmental, Inc.'s Site Safety and Health Plan for:

\_\_\_\_\_  
Project Name

\_\_\_\_\_  
Job No.

\_\_\_\_\_  
Employee Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

In case of emergency, please contact:

1.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Relationship

\_\_\_\_\_  
Phone No.

2.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Relationship

\_\_\_\_\_  
Phone No.

Received by:

\_\_\_\_\_  
Site Safety Officer

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

3 4 0458.

**TASK ENVIRONMENTAL, INC.**

**ATTACHMENT B**

**SITE ACTIVITY AND SAFETY BRIEFING**

Conducted by: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

List names and employers of those in attendance:

---

---

---

---

---

List items discussed:

---

---

---

---

---

---

---

3 4 0459

If any items require follow-up action, describe action below:

---

---

---

---

---

---

---

---

---

---

**TASK ENVIRONMENTAL, INC.****ATTACHMENT C****FIELD CHECKLIST FOR IMPLEMENTATION**

Fill in blanks and circle yes or no as appropriate for each. If an item does not apply, write N/A after question.

Site Safety Officer: \_\_\_\_\_ Date: \_\_\_\_\_

Project: \_\_\_\_\_ Location: \_\_\_\_\_  
(City) (State)

Job No.: \_\_\_\_\_ Weather Conditions: \_\_\_\_\_

**WORK ACTIVITIES**

- |     |   |     |    |
|-----|---|-----|----|
| 1.  | Is a copy of the site safety and health plan (SSHP) on-site?                                  | YES | NO |
| 2.  | Is the personal protective equipment required by the SSHP available and being used correctly? | YES | NO |
| 3.  | Have the work zones been delineated?  | YES | NO |
| 4.  | Has a decontamination station been set up as required by the SSHP?                            | YES | NO |
| 5.  | Are the decontamination procedures being followed?  | YES | NO |
| 6.  | Is access to the exclusion zone being controlled?   | YES | NO |
| 7.  | Has the site activities' briefing and tailgate safety meeting been provided?                  | YES | NO |
| 8.  | Is the list of emergency telephone numbers posted at the support zone?                        | YES | NO |
| 9.  | Are the directions to the nearest emergency medical assistance posted at the support zone?    | YES | NO |
| 10. | Is emergency equipment, as identified in the SSHP, readily available and functional?          | YES | NO |

3 4 0461

- |     |  |     |    |
|-----|--|-----|----|
| 11. | Has the nearest toilet facility been identified or a portable facility been set up?                                | YES | NO |
| 12. | Has an adequate supply of drinking water been provided?  | YES | NO |
| 13. | Has water for decontamination been provided?   | YES | NO |
| 14. | Have the instruments for environmental and exposure monitoring been calibrated and set up as required by the SSHP? | YES | NO |
| 15. | Are the instruments being used properly and periodically checked during the shift for battery charge status?       | YES | NO |
| 16. | Have trenches and excavations been clearly marked?   | YES | NO |
| 17. | Have trenches and excavations been shored or sloped as required by soil type and work activities?                  | YES | NO |
| 18. | Are dust suppression measures being used?  | YES | NO |
| 19. | Is food and tobacco consumption being restricted to the support zone?  | YES | NO |
| 20. | Has a confined space been identified as part of this project?  | YES | NO |

Identify:

- |     |  |     |    |
|-----|--|-----|----|
| 21. | Are the confined space entry procedures being correctly implemented? | YES | NO |
| 22. | Has the work/rest cycle for the shift been established?              | YES | NO |

Time on: \_\_\_\_\_ (mins.) Time off: \_\_\_\_\_

- |     |   |     |    |
|-----|---|-----|----|
| 23. | Has a shaded rest area been set up in the support zone? | YES | NO |
|-----|---|-----|----|

TASK Environmental, Inc. staff present:

Name

- |    |       |
|----|-------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |
| 4. | _____ |



3 4 0462

Subcontractors present and number of employees for each:

|    | <u>Subcontractor name</u> | <u>Number present</u> |
|----|---------------------------|-----------------------|
| 1. | _____                     | _____                 |
| 2. | _____                     | _____                 |
| 3. | _____                     | _____                 |

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Place a copy in the project file.

Reviewed by CHSO: \_\_\_\_\_  
Signature Date

Is follow-up with site safety office required? YES NO

Items: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date follow-up completed: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3 4 0463

**TASK ENVIRONMENTAL, INC.**

**ATTACHMENT E**

**DOCUMENT OF ENVIRONMENTAL MONITORING EQUIPMENT**

Name: \_\_\_\_\_ Project No.: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Equipment used:

|                              | Date(s)<br>Calibrated | Date(s)<br>Used |
|------------------------------|-----------------------|-----------------|
| OVA (Organic Vapor Analyzer) | _____                 | _____           |
| OVM (Organic Vapor Monitor)  | _____                 | _____           |
| HNU                          | _____                 | _____           |
| TLV Sniffer                  | _____                 | _____           |
| Photovac TIP                 | _____                 | _____           |
| Combustible Gas Meter        | _____                 | _____           |
| Other: _____                 | _____                 | _____           |

•

[illegible]